



Iowa Department of Public Health  
Division of Environmental Health

## Cleaning and Disinfecting After a Flood

**Follow these simple rules for cleaning and disinfecting items after flooding:**

1. Make sure the item is in **good repair**. Items that have been torn, splintered, cracked, broken, dented, etc. should be discarded and replaced.
2. To clean small items soaked by flood waters that are **porous** (**will** absorb water) such as bedding, clothing, stuffed animals, etc.
  - Pre-soak items in cold water before machine washing to remove mud and filth. DO NOT pre-soak in your washer as it may cause damage. Curtains, blankets, accent rugs and other large items can be hung on a line and hosed down to remove mud and filth.
  - Use hot water and detergent when washing items. Be careful not to overload the washing machine.
  - Add 1 cup of liquid chlorine bleach to wash water before adding clothes or other items, use ½ cup bleach for front loading washers.
  - Tumble dry in a dryer or hang items to dry in the sun.
3. Large items that are **porous** such as patio upholstered furniture, mattresses wall to wall carpeting, etc., that have been soaked by flood waters **MUST** be discarded.
4. To clean items that are **solid** (**will not** absorb water) such as a concrete, tile or vinyl flooring, plastic patio furniture, plastic toys, picture frames, etc. use a mild household detergent solution to clean the item.
5. To disinfect **solid** items (after cleaning), make a mild bleach and water solution (1/4 cup of bleach to one gallon of water). Use the solution in one of these ways:
  - Immerse small objects in the bleach/water solution for one minute. Remove from the solution and allow to air dry.
  - Spritz/spray the bleach/water solution on the item until thoroughly wet and allow to air dry.
  - Use a cloth dipped in the bleach/water solution to completely wipe the item down and allow to air dry.

**If in DOUBT, throw it OUT!**



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## Frequently Asked Questions About Cleaning Flooded Basements

**Overview:** Recent storms and rainfall have caused flooding throughout Iowa. As residents clean out their flood-damaged homes, the Iowa Department of Public Health has received many questions. This fact sheet answers those questions and others related to basement clean-up after a flooding event.

### What should I do before entering a flooded basement?

1. Turn off the electricity, preferable at the meter. If you cannot safely turn it off, contact your utility company to have it disconnected.
2. Turn off all gas valves.
3. Check outside cellar walls for possible cave-ins, structural damage, or other hazards.
4. Open doors and windows, or use blowers to force fresh air into the basement. Gas may be trapped inside your home.
5. Wear rubber gloves when handling materials that have been in floodwater.
6. Get a tetanus shot if necessary.

### What should I know before pumping water out of my basement?

Do not use an electric pump powered by your own electrical system. Instead, use a gas-powered pump or one connected to an outside line.

More damage may be done by pumping water from the basement too soon or too quickly than from letting the floodwater remain. Water in the basement helps brace the walls against the extra pressure of water-logged soil outside. If water is pumped out too soon, walls may be pushed up or collapse.

To help prevent structural damage, pump water out of your basement in stages. Remove about one-third of the water each day. This will prevent structural damage or collapsing of basement walls due to unequal pressure.

### What about the clean-up process?

- Shovel out any mud and debris while it is still moist.
- Hose down walls and remove as much silt as possible before it dries.
- Floors and walls may need sanitizing, particularly if sewage has entered the basement.
- Scrub walls and floors with a mild bleach and water solution (one tablespoon of bleach to one quart of water). Allow the area to dry completely.
- In homes without basements, the area below the floor may be completely filled with mud. Remove the mud as soon as possible to avoid rotting joists or foundation wood.

# OSHA FactSheet

## Cleanup Hazards

Cleanup work of any kind is hazardous, but flood conditions make it even more so. Following the procedures listed below will help to keep you safe and healthy while cleaning up after natural disasters that involve flooding.

### Health Tips

- Take frequent rest breaks when lifting heavy, water-laden objects. Avoid overexertion and practice good lifting techniques. To help prevent injury, use teams of two or more to move bulky objects; avoid lifting any materials that weigh more than 50 pounds per person, and use proper automated lifting assistance devices if practical.
- When working in hot environments, have plenty of drinking water available, use sunscreen, and take frequent rest breaks. Wear light-colored, loose-fitting clothing.
- Be sure that a first aid kit is available to disinfect any cuts or abrasions. Protect open cuts and abrasions with waterproof gloves or dressings.
- Wash your hands often during the day, especially before eating, drinking, or applying cosmetics.

### General Precautions

- Use a wooden stick or pole to check flooded areas for pits, holes, and protruding objects before entering.
- Ensure that all ladders and scaffolds are properly secured prior to use.
- Conduct a preliminary worksite inspection to verify stability before entering a flooded or formerly flooded building or before operating vehicles over roadways or surfaces. Don't work in or around any flood-damaged building until it has been examined and certified as safe for work by a registered professional engineer or architect.
- Washouts, trenches, excavations, and gullies must be supported or their stability verified prior to worker entry. All trenches should be supported (e.g., with a trench

box); if no support is available, the trench must be sloped at no less than a 1:1 (45°) angle for cohesive soil and angular gravel and a 1½:1 (34°) angle for granular soils including gravel, sand, and loamy sand or submerged soil or soil from which water is freely seeping.

- Establish a plan for contacting medical personnel in the event of an emergency.
- Report any obvious hazards (downed power lines, frayed electric wires, gas leaks or snakes) to appropriate authorities.
- Use fuel-powered generators outdoors. Do not bring them indoors, as they may pose a carbon monoxide (CO) hazard.
- Use life-vests when engaged in activities that could result in deep water exposure.
- Use extreme caution when handling containers holding unknown substances or known toxic substances (for example, floating containers of household or industrial chemicals). Contact the EPA (Environmental Protection Agency) for information on disposal at the National Response Center (800) 424-8802.
- Do NOT use improvised surfaces (e.g., refrigerator racks) for cooking food or for boiling water to avoid exposure to heavy metals.

### Clothing and Personal Protective Equipment

- Always wear watertight boots with a steel toe and insole, gloves, long pants, and safety glasses during cleanup operations; sneakers should NOT be worn because they will not prevent punctures, bites or crush injuries. Wear a hardhat if there is any danger of falling debris.
- Wear a NIOSH-approved dust respirator if working with moldy building materials or

- vegetable matter (hay, stored grain, or compost).
- When handling bleach or other chemicals, follow the directions on the package; wear eye, hand, and face protection as appropriate; and have plenty of clean water available for eyewash and other first aid treatments.

#### **Electrical Hazards**

- Do NOT touch downed power lines or any object or water that is in contact with such lines.
- Treat all power lines as energized until you are certain that the lines have been de-energized.
- Beware of overhead and underground power lines when clearing debris. Extreme caution is necessary when moving ladders and other equipment near overhead power lines to avoid inadvertent contact.
- If damage to an electrical system is suspected (for example, if the wiring has been under water, you can smell burning insulation, wires are visibly frayed, or you see sparks), turn off the electrical system in the building and follow lockout/tagout procedures before beginning work. Do not turn the power back on until electrical equipment has been inspected by a qualified electrician.
- When using a generator, be sure that the main circuit breaker is OFF and locked out

- prior to starting the generator. This will prevent inadvertent energization of power lines from backfeed electrical energy from generators and help protect utility line workers from possible electrocution.
- Be aware that de-energized power lines may become energized by a secondary power source such as a portable backup generator.
  - Any electrical equipment, including extension cords, used in wet environments must be marked, as appropriate, for use in wet locations and must be undamaged. Be sure that all connections are out of water.
  - All cord-connected, electrically operated tools and equipment must be grounded or be double insulated.
  - Ground-fault circuit interrupters (GFCIs) must be used in all wet locations. Portable GFCIs can be purchased at hardware stores.

#### **Fire Protection**

- Immediately evacuate any building that has a gas leak until the leak is controlled and the area ventilated.
- Be sure that an adequate number of fire extinguishers are available and re-evaluate the fire evacuation plan.
- Be sure that all fire exits are clear of debris and sandbags.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

For more complete information:



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